

Abstract

A method for placing equipment in a network begins with a baseline network on which demographic data is analyzed statistically to produce a demographically-driven driven demand forecast model. The demand forecast model yields a predicted demand

5 for each census block group. This can be visualized as one map layer with a GIS. The layout method takes the predicted demands as input and produces new attribute information for network nodes, the central office and cross-connects. By the layout method the cost of placing equipment at available placement sites or nodes is minimized based on various constraints, e.g., the capacity of the equipment to be

10 placed, the distance a user is located from a potential node. Once the minimum cost for a given set of placement sites, subscribers, equipment capacity, and other known constraints is determined the equipment are then placed at these sites. These include the number and type of DSLAMs assigned to each node. These can be visualized with the GIS by clicking-on a node to expose the equipment deployed there.